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AGRICULTURAL RESEARCH SERVICE

Appraisal of Production Needs and Accomplishments As a Guide to
Research Programming

This study was organized as a continuing project in May 1953 after the issuance of Dr. Byron T. Shaw's paper, "The Role of Research Results in Meeting Future Agricultural Requirements." Its purpose is to explore more fully the whole problem of our long-term needs for food and fiber, and the relation of our research programs to obtaining the various kinds of agricultural products in the amounts and at the time they may be needed.

Some of the Department's commodity specialists and those who spend full time in studying consumption trends have taken a fresh look at our probable future needs for farm products by 1975. With this study particularly in mind they have provided their best estimates of requirements in terms of bushels of wheat, tons of sugar, pounds of beef and other specific farm production units. This phase of the work has been made available in draft form to those engaged in this study and is summarized in the July 1956 issue of the USDA publication, Agricultural Economics Research, in the article by Rex F. Daly, "The Long Run Demand for Farm Products."

Having thus obtained a good idea of our nation's future needs for the products of American farms, the next step is to explore the different means we might employ to meet these needs. We could, for example, increase per acre and per unit yields of crops and livestock ^{by} more fully employing available practices that tend to increase production. Another approach would be to farm pretty much as now but to rely more on increasing crop acreages and livestock numbers rather than on production per unit to obtain needed production increases.

We can inquire into the possibilities of making more land available through irrigation, drainage and land clearing, or through more intensive use of our present cropland base. We can study the possibilities in elimination of waste on the farm; preserving for consumption more of the product produced. We can also look into the probable effect on production of the increasing mechanization of farms, and the whole field of efficiency the farmer employs in use of his land, labor and capital. The alternatives mentioned above reveal a bewildering array of tools we can use in various combinations to meet future needs. An important part of our study, therefore, is to examine which of these factors or what combinations of them offer the greatest possibilities in supplying future needs.

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With this as a background, we are then ready to analyze the present rate of agricultural output and of adoption of improved practices in relation to future needs for farm products. At the heart of the entire study, of course, is the need to relate our present research program to these prospective future needs. Is the present research emphasis continued through the years likely to supply the needed research results? Or will the study reveal a number of places for particularly worthwhile investment of future research dollars? This is why the title of the study stresses guidance to research programming as a major orientation.

General leadership on the project is being provided by workers in the Production Economics Research Branch, ARS, and by the Office of the Research Administrator. The study involves close cooperation with many workers in the Department and especially with natural scientists in ARS. One of the first jobs has been to develop a set of crop yields that appear possible of attainment by 1975. In this connection, we have assembled various estimates of this sort that have been made in the past, results of recent experiments in various states and other supplementary information. Crop specialists and others have contributed greatly in appraising these data and in jointly developing summary estimates of probable yields. Similar background data are now being prepared for use in conferences with the livestock specialists at the Research Center during the fall of 1956. The purpose will be to develop estimates of 1975 attainable rates of production per head and per unit of feed, for various classes of livestock.





